

each of the plurality of holes has a diameter d in a range of from 10mm to 25mm,

each of the plurality of holes is separated from an adjacent hole by a center-to-center distance in a range of from 1.2d to 3d,

the perforated tray without downcomer has a thickness in a range of from 2mm to 8mm, and

the perforated tray without downcomer has an opening ratio in a range of from 10% to 30%,

wherein multiple perforated trays without downcomer are used at the same stage in a perforated tray tower without downcomer, and the two most closely located holes of any respective adjacent perforated trays without downcomer are separated by a distance between 50mm and 150mm.

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~~3 (amended).~~ A perforated tray without downcomer provided with a plurality of holes, wherein

each of the plurality of holes has a diameter d and is separated from an adjacent hole by a center-to-center distance in a range of from 1.2d to 3d,

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~~4 (amended).~~ A perforated tray tower without downcomer, comprising a plurality of perforated trays without downcomer disposed respectively at a plurality of stages, each of the plurality of perforated trays without downcomer being provided with a plurality of holes, wherein

each of the plurality of holes has a diameter d in a range of from 10mm to 25mm,

the perforated tray without downcomer has a thickness in a range of from 2mm to 8mm,

the perforated tray without downcomer has an opening ratio in a range of from 10% to 30%, and

each of the plurality of holes is separated from an adjacent hole by a center-to-center distance in a range of from $1.2d$ to $3d$,

wherein, when two or more of the plurality of perforated trays without downcomer are used at the same stage, the two most closely located holes that respectively belong to adjacent perforated trays are separated from one another by a center-to-center distance in a range of from 50mm to 150mm.

5v^aB₂ > 7 (amended). A perforated tray tower without downcomer, comprising a plurality of perforated trays without downcomer disposed respectively at a plurality of stages, wherein

the plurality of perforated trays without downcomer disposed respectively at vertically adjacent spacing have a blind ratio of at least 0.2.

5v^aB₃ > 9 (amended). A method of distillation, comprising the step of distilling an easily polymerizable compound or a liquid containing an easily polymerizable compound, using a perforated tray tower without downcomer, comprising a plurality of perforated trays without downcomer disposed respectively at a plurality of stages,

each of the plurality of perforated trays without downcomer being provided with a plurality of holes, wherein

each of the plurality of holes has a diameter d in a range of from 10mm to 25mm,

the perforated tray without downcomer has a thickness in a range of from 2mm to 8mm,

the perforated tray without downcomer has an opening ratio in a range of from 10% to 300, and

each of the plurality of holes is separated from an adjacent hole by a center-to-center distance in a range of from $1.2d$ to $3d$,

wherein, when two or more of the plurality of perforated trays without downcomer are used at the same stage, the two most closely located holes that respectively belong to adjacent perforated trays are separated from one another by a center-to-center distance in a range of from 50mm to 150mm,

wherein an easily polymerizable compound or a liquid containing an easily polymerizable compound is distilled.

10 (amended). The method of distillation as defined in claim 9, wherein the distillation step is carried out under at least one of first and second conditions,

the first condition being such that an amount of wetting liquid with respect to a cross-sectional area of the tower is at least $0.3\text{m}^3/\text{m}^2 \cdot \text{h}$, and

the second condition being such that an amount of wetting liquid with respect to a sum of areas of the plurality of holes is at least $1\text{m}^3/\text{m}^2 \cdot \text{h}$.

~~Please enter new claim 14.~~

14 (new). A method of distillation, comprising the step of distilling an easily polymerizable compound or a liquid containing an easily polymerizable compound, the compound being at least one compound selected from the group consisting of (meth)acrylic acid and esters thereof,

wherein a plurality of perforated trays without downcomer are disposed respectively at a plurality of stages, each of the plurality of perforated trays without downcomer being provided with a plurality of holes;

each of the plurality of holes has a diameter d in a range of from 10mm to 25mm;

each of the plurality of perforated trays without downcomer has a thickness in a range of from 2mm to 8mm;

each of the plurality of perforated trays without downcomer has an opening ratio in a range of from 10% to 30%; and

each of the plurality of holes is separated from an adjacent hole by a center-to-center distance in a range of from 1.2d to 3d.

REMARKS

In the Office Action dated July 17, 2002, claims 1-13 are pending and all claims are rejected. The above amendment is submitted to more particularly point out and distinctly claim the subject matter regarded as invention. applicants appreciate the acknowledgement of patent able subject matter, at least in claims 4-6 and 9-12.